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PATENT ABSTRACTS OF JAPAN

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(21)Application number : 06-321488 (71)Applicant : DAIHEN CORP

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(54) METHOD FOR JOINING SILICON CARBIDE SINTERED COMPACTS TO EACH OTHER

(57)Abstract:

PURPOSE: To improve the strength, heat resistance and thermal shock resistance of a joined part by holding specified sheetlike carbon between silicon carbide sintered compacts contg. free silicon in at least one of them and heating them after pressing in a direction perpendicular to faces to be joined.

CONSTITUTION: Sheetlike carbon having several ten to several hundred μm thickness and a bulk density of 1.9 is held between silicon carbide sintered compacts contg. free silicon in at least one of them and they are fixed by pressing under 1kg/cm² pressure in a direction perpendicular to faces of the sintered compacts to be joined. When silicon is fed from the outside at the time of heating, the sintered compacts are heated to a temp. above the melting temp. of free silicon or that of the fed silicon in a non-oxidizing atmosphere. When silicon is not fed from the outside, they are heated to a temp. above the melting temp. of free silicon in a nonoxidizing atmosphere. The sheetlike carbon is allowed to react with molten silicon to form silicon carbide contg. free silicon. At the same time, the carbon is allowed to react with silicon carbide in the faces of the sintered compacts to be joined and sintering is carried out.

LEGAL STATUS

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